Exhibit 2

Attached is an abstract of the article. Efforts to obtain the full article are being made. A supplement to this Preliminary Amendment will be filed as soon as it is received.

Startup energies in energy-recovery CMOS

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Subject(s): CX.07

Category: Brief Article

Abstract:

In this paper, we will discuss two examples of energy-recovery logic circuits---a resonant LRC circuit and a stepwise signal driver---and explore the relationships between startup energy and steady-state energy. Both examples show an inverse relationship between stored energy and dissipated energy. In the stepwise-driver example, we also explicitly compute the total startup energy, which shows an even stronger dependence on the dissipated energy. In both cases, we assume a CMOS technology. MOS switching devices are assumed in most discussions about low-power logic circuits: the absence of recombination of controlling and controlled charges allows not only frugal operation, but also accurate book-keeping, which simplifies evaluation of proposed circuit schemes.

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